

Work Order ID 66361

Page 1

Friday, February 11, 2011 1:15:54 PM

Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 2/14/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 2/28/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start

Approvals: Process Plan: MF Date: 11-02-11 Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D3274

D

JIN-D206-642

Rev M

100

0.00



DOCUMENT CONTROL

DC

0.00

Memo

Document Control

Photocopy bluefile & type labels per PPP D206-642-541

CHG003

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110

0.00



Skidtubes

Skidtubes

Skidtubes

Memo

0.00

****VERIFY AND INSPECT THE MATERIAL PRIOR TO USE****

1- Bend FWD end of tube using bend prog D3274 FWD and foil 10 as per dwg D3274, cut fwd end of tube with saw table setup D3274.

11-3-10

2- remove fwd indexing ridge as per dwg D3274. Prepare for welding

BE 11/04/13

3- weld fwd cap as per dwg D3274 and OSI004-

AR Aluminum Rod Batch: m111385/m116577

BE 11/04/13

4- grind fwd cap weld on top surface only

BE 11/04/13

5- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.

6-Drill Aft cap pilot hole using DT8025

7 -Cleco DT8025 in position and install pilot hole drill Jig DT8742A,B,C,D. Drill 3/16" pilot holes as per Dwg D3274

8 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe batch #

9 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.

11-4-14

W/O:		WORK ORDER CHANGES					
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Run Start

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

114

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

m/ 11 04 45 ①

116

QC10- Inspect visual per QS1004- ground welds

0.00



QC

Memo

0.00

Quality Control

SAD 11-04-18

②

120

Chemical Conversion Coat per QS1005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

SAD 11-04-18

③

W/O:		WORK ORDER CHANGES					
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Customer:

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130



QC

Quality Control

QC3- Inspect Part Finish

0.00

Memo

0.00

11.05.11

150



Skidtubes

Skidtubes

Skidtubes

Memo

0.00

0.00

✓1-Open Ø0.313" and 0.375" crossbolt spacer holes as per Dwg D3274

✓2-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube

✓3-Bond web in place as per Dwg D3274 & QSI 015.

A/R ☐ Sikaflex-291 ☐ M116948 ☐

Sikaflex expire date: ☐ 15 Jan 2012

Start: ☐ 11.05.11 ☐ Time: ☐ 5:00 PM

Finish: ☐ 11.05.11 ☐ Time: ☐ 1:00 PM

(Adhere for 12 hours)

11.05.11

W/O:		WORK ORDER CHANGES					
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

160



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

1 0 BE 11/05/10

170



Skidtubes

Skidtubes

Skidtubes

0.00

Memo

0.00

1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position.

DP 11-518

2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2
OPEN HOLES TO .297" . Deburr3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD
END OF TUBE
DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES)
REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES

BB

11/05/24

4- Countersink crossbolt spacer holes as per Dwg D3274

5- prepare for welding

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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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180



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

4.6° - 3.0"
BEND

1

0

BE 11/05/25

Memo

0.00

190



Skidtubes

Skidtubes

Skidtubes

0.00

Memo

0.00

- 1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod A/R ☐ Aluminum Rod ☒ M11385 BE 11/05/25

3-Grind cross bolt welds flush as per Dwg D3274.

4-Counterbore 5/16" x 0.750" deep as per Dwg D3274 and deburr.

BB 11/05/25
BE 11/05/26
DA 11/05/26

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00							
		8/11/05/31							
210 QC Quality Control	QC10- Inspect visual per QSI004- ground welds Memo	0.00 0.00							
		8/11/05/31							
220 HandFinish Hand Finishing	Pressure Wash per QSI005 4.3 Memo Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch	0.00 0.00							
									IX 2/16/06/01

W/O:		WORK ORDER CHANGES					
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

230

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

0.00

Powder Coating

240

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

250

HandFinishing

0.00



HandFinish

Memo

0.00

Hand Finishing

✓ 1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets.
A/R ☐ N ☐ A ☐ LPS-3 ☐ M109956

✓ 2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a
A/R ☐ ☐ Sikaflex-291 ☐ M114945
Sikaflex expire date: ☐ 12/01

1X ~~Ø~~ M/L 11/06/021 ~~Ø~~ M/L 11/06/021 ~~Ø~~ M/L 11/06/07

W/O:		WORK ORDER CHANGES					
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

260

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

Inspect Nut Plate & Inserts

Suloblor



270

HAND FINISHING RESOURCE #1

0.00



HandFinish

Memo

0.00

Hand Finishing

1-Install wearpads & gaskets as per Dwg D3274.

2-Install ring as per Dwg D3274

A/R ☐ Sikaflex-291 ☐ M1116945Sikaflex expire date: ☐ 12/01

3-Inspect for foreign objects as per QSI 024

4-Spray inside of tube on both sides of web with LPS-3

A/R LPS-3 Batch: M112

5-Install Aft Cap and seal with Sikaflex. Clean excess adhesive.

A/R ☐ Sikaflex-291 ☐ M1116945Sikaflex expire date: ☐ 12/01

1 p M1116945

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

280



QC

Memo

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

8 110603

0.00

290



Packaging

Packaging

Identify as per dwg & Stock Location: _____

0.00

Memo

P0066368

0.00

300



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

OK 110603

MK

11-06-03

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Picklist Print

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Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube


Start Date: 2/14/2011

Required Date: 2/28/2011


Start Qty: 1.00

Required Qty: 1.00


Comments: IPP Rev:B 05.09.23 Revised per D206-642 Rev. J KJ/JLM
 IPP Rev:C 07-02-23 Added SS Wearplates & Gaskets JLM
 IPP Rev:D 07-12-06 replace NAS1515H3L to D3672-1 DD
 IPP Rev:E 08-04-17 as per PAR 08-015 DD verified by:EC
 IPP Rev:F 08-06-02 add comment DD verified by:EC
 IPP Rev:G 08-10-09 revise details DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-1-190  Extrusion Round 3" 206		Manufactured	No			110	Each	43.0000	1	1			

Location	Loc Qty	Loc Code
LG	43	
47575	2	
59874	41	

D3285-1  Cap		Manufactured	No			110	Each	114.0000	1	1			
--	--	--------------	----	--	--	-----	------	----------	---	---	--	--	--

Location	Loc Qty	Loc Code
LG	114	
52511	66	
52647	48	

D3282-041  Float Web (206L/407)		Manufactured	No			150	Each	4.0000	1	1			
---	--	--------------	----	--	--	-----	------	--------	---	---	--	--	--

Location	Loc Qty	Loc Code
LG	4	
65292	1	
65293	3	
66363	1	

① DP 11-3-10

BE 11/04/13

1

11.05.11

W/O:		WORK ORDER CHANGES					
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Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube



Start Date: 2/14/2011

Required Date: 2/28/2011

Start Qty: 1.00

Required Qty: 1.00

D2649 Manufactured No 190 Each 243.0000 12 12



Cross Bolt Spacer



BE 11/05/25
B 68224 x12

Location Loc Qty Loc Code

LG	243	
58545	2	
60652	4	
61496	2	
62889	11	
63359	3	
65317	221	

D3275-1 Manufactured No 190 Each 53.0000 12 12



Crossbolt Spacer



BE 11/05/25
B 67767 x12

Location Loc Qty Loc Code

LG	53	
53453	8	
62399	1	
63546	19	
65295	25	

CR3212-4-03 Purchased No 250 Each 1,863.000 2 2



Cherry Rivet



all 11/06/02

Location Loc Qty Loc Code

ST311	1863	
110153	35	
111359	5	
112314	2	
114436	448	
114450	31	
114859	1342	

M110139

x12

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Shop Packet Print

Page 2

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Parent Item Name: Replacement Skidtube

Start Date: 2/14/2011


Required Date: 2/28/2011

Start Qty: 1.00


Required Qty: 1.00

D3415-041 Manufactured No 250 Each 25.0000 1 1

 Nut Plate  HL 11/06/02

	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
CCR264SS3-3 Purchased No 250 Each 154.0000 2	ST056	25	
	33842	25	
			<u>V1</u>
			<u>2</u>

Cherry Rivet  HL 11/06/02

	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ALS4-1032-130 Purchased No 250 Each 1,355.000 78	ST311	154	
	112314	4	
	113539	44	
	113973	106	
			<u>V2</u>

Insert  HL 11/06/02

	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
PKG11		1220	
	114723	220	
	116864	1000	
ST282		96	
	110511	10	
	115911	86	
ST381		39	
	114654	39	

V78
 11117331

W/O:		WORK ORDER CHANGES					
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Work Order ID: 66361

Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 2/14/2011



Required Date: 2/28/2011

Start Qty: 1.00



Required Qty: 1.00

D3536-15 Manufactured No 270 Each 10.0000 1 1
  HL 11/06/10Z
 Gasket

Location	Loc Qty	Loc Code	
FP	1	B66554	<u>VL</u>
56055	1		
FP011	8		
63568	8		
FP11	1		
59238	1		

D3536-23 Manufactured No 270 Each 11.0000 1 1
  HL 11/06/10Z
 Gasket

Location	Loc Qty	Loc Code	
FP011	1		
63570	1	B66560	<u>VL</u>
ST	10		
66240	10		

D3536-35 Manufactured No 270 Each 16.0000 1 1
  HL 11/06/10Z
 Gasket

Location	Loc Qty	Loc Code	
FP012	16		
58683	1		
63579	1	B67549	<u>VL</u>
65573	2		
66237	12		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, February 11, 2011 1:15:50 PM

Page 5

Work Order ID: 66361

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 2/14/2011

Required Date: 2/28/2011

Start Qty: 1.00

Required Qty: 1.00

D3536-39 Manufactured No 270 Each 19.0000 1 1
Gasket
Barcode
Handwritten: xl u106102

Location Loc Qty Loc Code

FP012 18
63578 6
66241 12
FP12 1
58215 1

D3535-15 Manufactured No 270 Each 3.0000 1 1
Wearshoe
Barcode
Handwritten: 136658, 866538, xl u106102

Location Loc Qty Loc Code

FP18 3
63569 3

D3535-35 Manufactured No 270 Each 12.0000 1 1
Wearshoe
Barcode
Handwritten: 1367548, xl u106102

Location Loc Qty Loc Code

FP018 12
65926 12

D3535-39 Manufactured No 270 Each 13.0000 1 1
Wearshoe
Barcode
Handwritten: xl u106102

Location Loc Qty Loc Code

FP-18 13
64076 13

Friday, February 11, 2011 1:15:50 PM

Shop Packet Print

Page 5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, February 11, 2011 1:15:50 PM

Page 6
8

Work Order ID: 66361

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 2/14/2011

Required Date: 2/28/2011

Start Qty: 1.00

Required Qty: 1.00

D3535-23 Manufactured No 270 Each 5.0000 1 1
Wearshoe
JH 11/06/02

Location Loc Qty Loc Code
FP021 5 B67594
63571 4

x1

D3537-3 Manufactured No 270 Each 30.0000 1 1
Wearpad
JH 11/06/02

Location Loc Qty Loc Code
FP17 30 B66230
65929 30

x1

D3537-1 Manufactured No 270 Each 39.0000 9 9
Wearpad
JH 11/06/02

Location Loc Qty Loc Code
FP017 39 B68944
65057 39

x9

AN960C10L NAS1149C0332 Purchased No 270 Each 25.0000 80 80
washer
JH 11/06/02

Location Loc Qty Loc Code
ST245 25 M 117291
107534 25

x80

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, February 11, 2011 1:15:50 PM

Page 7

Work Order ID: 66361

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 2/14/2011

Required Date: 2/28/2011

Start Qty: 1.00

Required Qty: 1.00

AN960C416 NAS1149C0463 Purchased No

270 Each 29.0000 1 1



washer



all 1/06/02

Location

Loc Qty

Loc Code

ST346

29

M117735

xl

100993

29

D3672-1 Manufactured No

270 Each 1,149.000 2 2



Phenolic Washer



all 1/06/02

Location

Loc Qty

Loc Code

ST077

1149

42329

10

52505

139

64177

1000

x2

AN3C4A Purchased No

270 Each 1,420.000 80 80



BOLT



all 1/06/02

Location

Loc Qty

Loc Code

ST350

1420

M117094

x80

115300

25

116075

361

116590

34

116704

1000

AN4C5A Purchased No

270 Each 439.0000 1 1



BOLT



all 1/06/02

Location

Loc Qty

Loc Code

ST346

439

110552

1

112243

438

xl

Friday, February 11, 2011 1:15:50 PM

Shop Packet Print

Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, February 11, 2011 1:15:50 PM

Page 8

Work Order ID: 66361

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 2/14/2011

Required Date: 2/28/2011

Start Qty: 1.00

Required Qty: 1.00

D2646

Manufactured No

270

Each

76.0000

1

1



Aft Cap

XL

11/06/02

Location

Loc Qty

Loc Code

FP-4

6

57332

6

FP6

16

52663

3

62678

12

63633

1

Return 2010

54

62678

54

XL

D3413-1

Manufactured No

270

Each

25.0000

1

1



Ring

XL

11/06/02

Location

Loc Qty

Loc Code

ST420

9

62961

9

ST473

16

51586

1

53446

5

65294

10

B66445

XL

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

RELEASED

07.02.12

DEO ATTACHED

DESIGN CP	DRAWN BY PH	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3274	REV. D SHEET 1 OF 4
DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY	SCALE NTS
A	04.03.15	NEW ISSUE	
B	04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76	
C	05.03.16	ADD -043; NEW INSERTS	
D	06.12.19	NEW INSERTS, SS WEARSHOE + GASKET	

Qty -041	Qty -043	Part Number	Description
X		D3274-041	SKIDTUBE ASSEMBLY
	X	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
1	1	D2646	AFT CAP
12	12	D2649	CROSS BOLT SPACER
12	37	D3275-1	CROSS BOLT SPACER
1	1	D3282-041	FLOAT WEB
1	1	D3285-1	CAP
1	1	D3413-1	RING
1	1	D3415-041	NUT PLATE
1	1	D3535-15	WEARSHOE
1	1	D3535-23	WEARSHOE
1	1	D3535-35	WEARSHOE
1	1	D3535-39	WEARSHOE
1	1	D3536-15	GASKET
1	1	D3536-23	GASKET
1	1	D3536-35	GASKET
1	1	D3536-39	GASKET
9	9	D3537-1	WEARPAD
1	1	D3537-3	WEARPAD
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	AN3C4A	BOLT
1	1	AN4C5A	BOLT
1	1	AN960C416	WASHER
80	80	AN960C10L	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	NAS1515H3L	WASHER

GENERAL NOTES:

1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
3. ALL HOLES DRILLED ON CENTERLINES.
4. BOND D3282-041 FLOAT WEB INTO D3274-1/-3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
5. WELDING TO BE DONE PER DART QSI 004.
6. FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
7. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/-291.
8. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

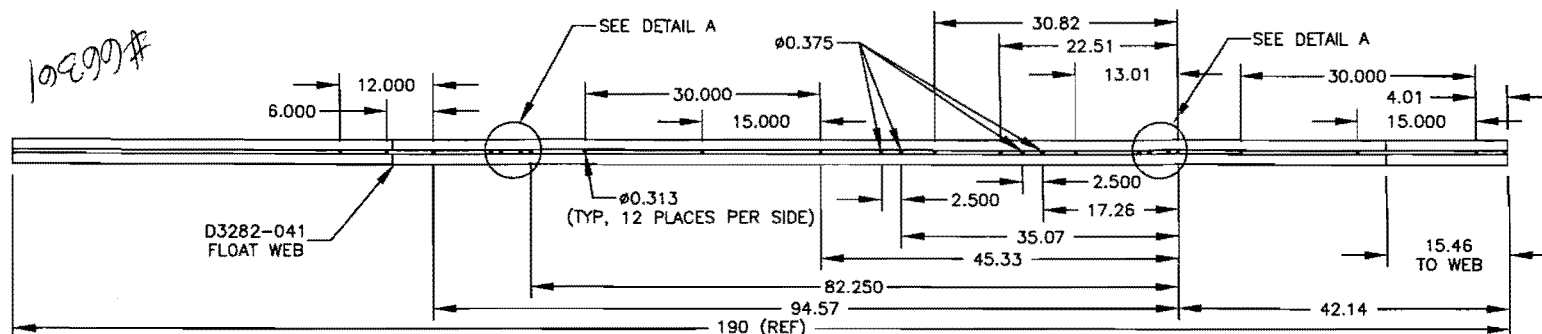
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

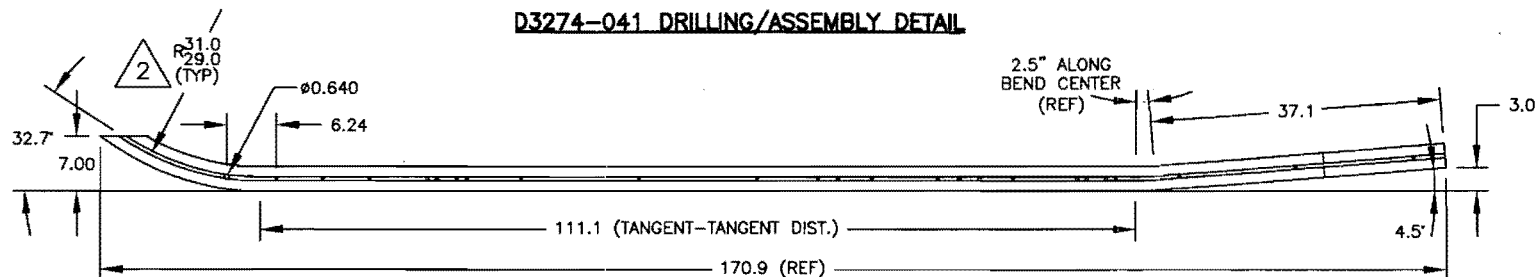
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

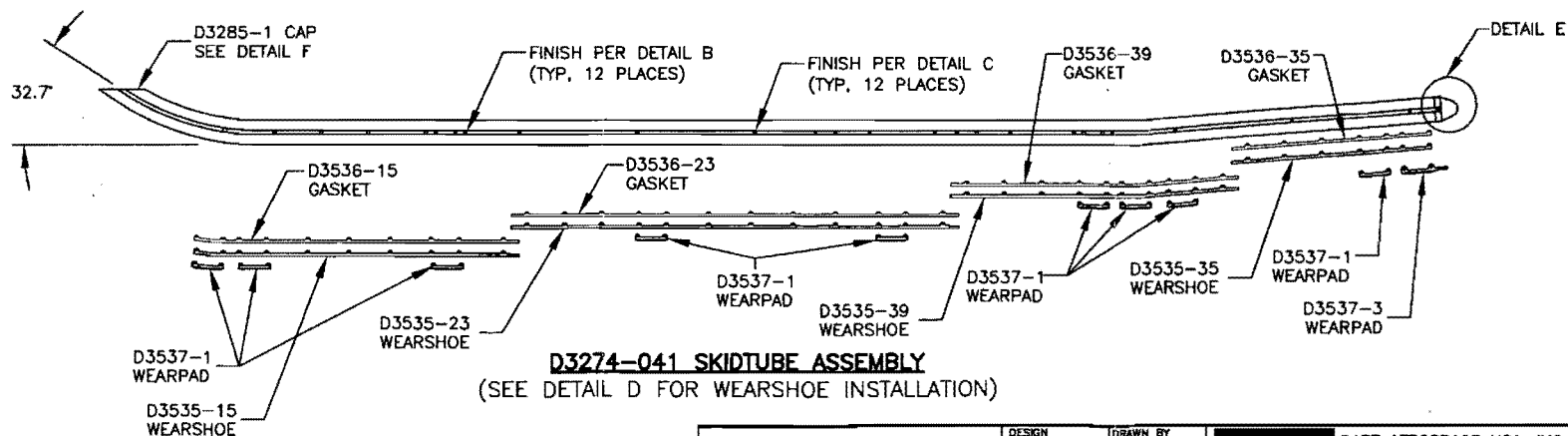
DEO ATTACHED



D3274-041 DRILLING/ASSEMBLY DETAIL



D3274-041 BEND/DRILLING DETAIL



D3274-041 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

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07.02.12

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		CP	PH	PORT WADSWORTH, MA	
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		DATE		D3274	SHEET 2 OF 4
		06.12.19		TITLE	SCALE
				SKIDTUBE ASSEMBLY	1:15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

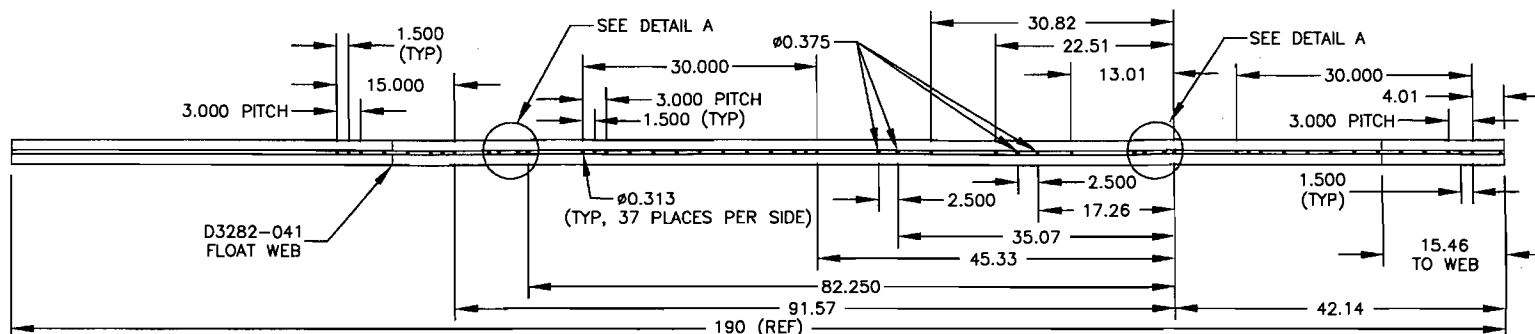
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

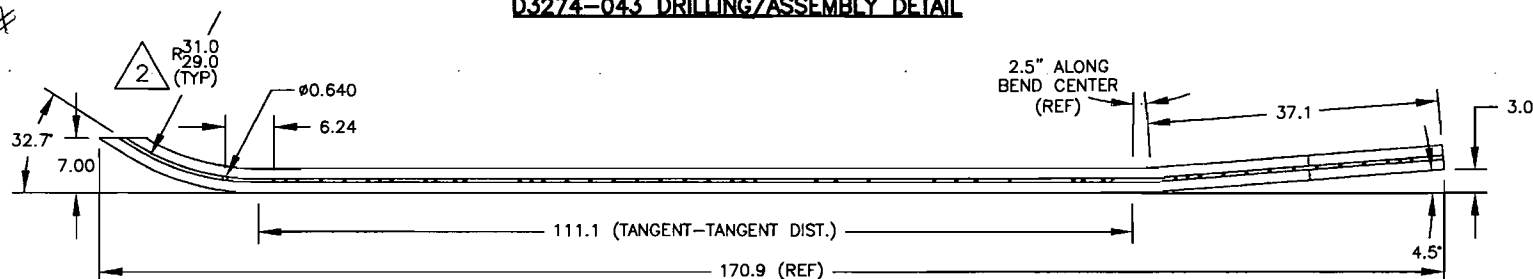
NOTE: Date & initial all entries

DEO ATTACHED

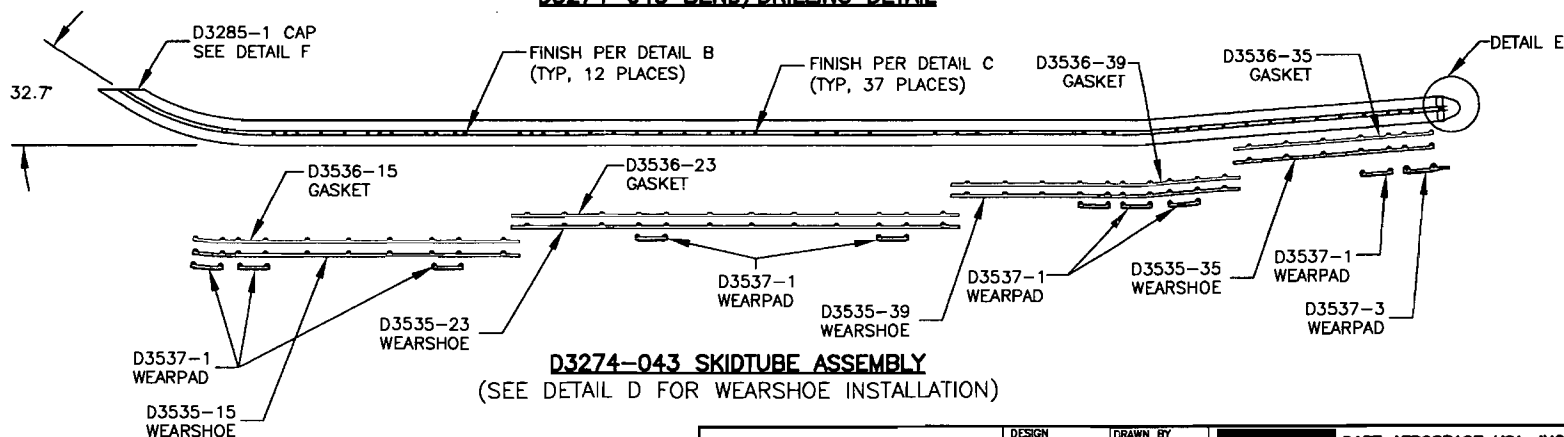


D3274-043 DRILLING/ASSEMBLY DETAIL

19599#



D3274-043 BEND/DRILLING DETAIL



D3274-043 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

RELEASED

07.02.12

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DESIGN	CP	DRAWN BY	PH	DART	DART AEROSPACE USA, INC.
CHECKED	#	APPROVED	#	DRAWING NO.	D3274
DATE	06.12.19	TITLE	SKIDTUBE ASSEMBLY	REV. D	SHEET 3 OF 4
				SCALE	1:15

Dart Aerospace Ltd

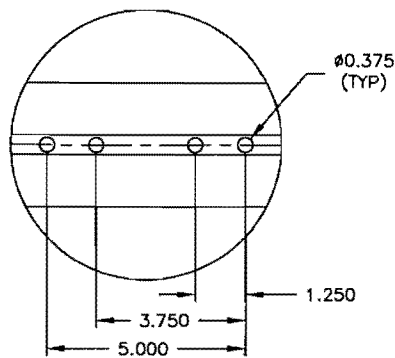
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

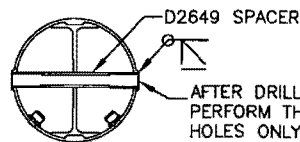
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DETAIL A: DRILL DETAIL

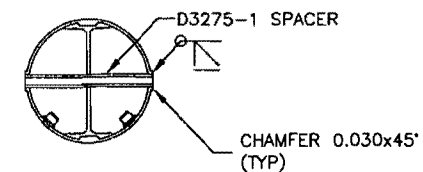


DETAIL B FOR 0.375 HOLES ONLY

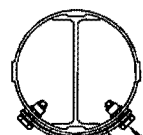


- AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR 0.375
HOLES ONLY:
1. CHAMFER HOLE 0.030x45°
 2. INSERT D2649 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. C'BORE TO 0.313x0.75 DEEP

DETAIL C FOR 0.313 HOLES ONLY



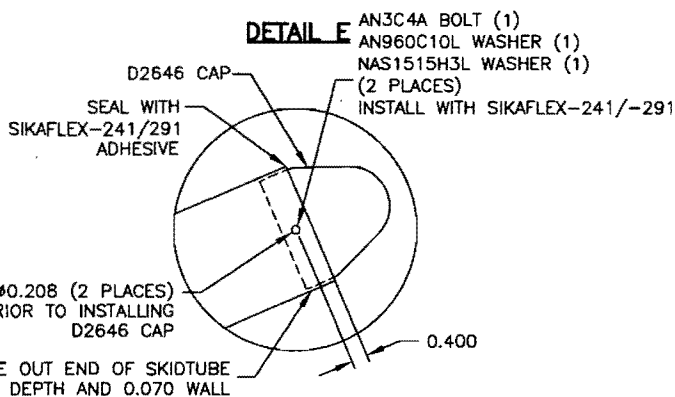
DETAIL D



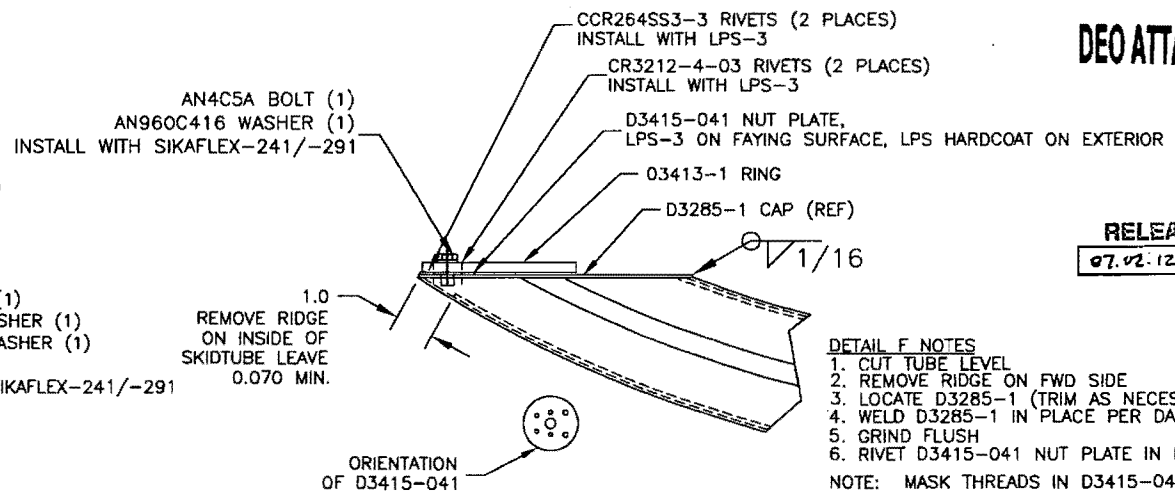
- ALS7-1032-130 INSERT (1)
AN3C4A BOLT (1)
AN960C10L WASHER (1)
(78 PLACES)

GASKET/WEARSHOE/WEARPAD (REF)

DETAIL E



DETAIL F: END FINISHING DETAIL



- DETAIL F NOTES**
1. CUT TUBE LEVEL
 2. REMOVE RIDGE ON FWD SIDE
 3. LOCATE D3285-1 (TRIM AS NECESSARY)
 4. WELD D3285-1 IN PLACE PER DART QSI 004
 5. GRIND FLUSH
 6. RIVET D3415-041 NUT PLATE IN PLACE
- NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

DEO ATTACHED

RELEASED
07.02.12

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DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY		SCALE 1:3	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DRAWING NO. D3274	TITLE SKIDTUBE ASSEMBLY	REV. D	DART AEROSPACE USA, INC ENGINEERING ORDER	D.E.O. NO. D3274-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>CP</i>	CHECKED <i>1</i>	MFG. APPR. <i>M</i>	APPROVED <i>MAP</i>	DE APPR. <i>#</i>		
DATE 09.06.17	DATE 09.06.23	DATE 09/06/23	DATE 09/06/23	DATE 09.06.23		

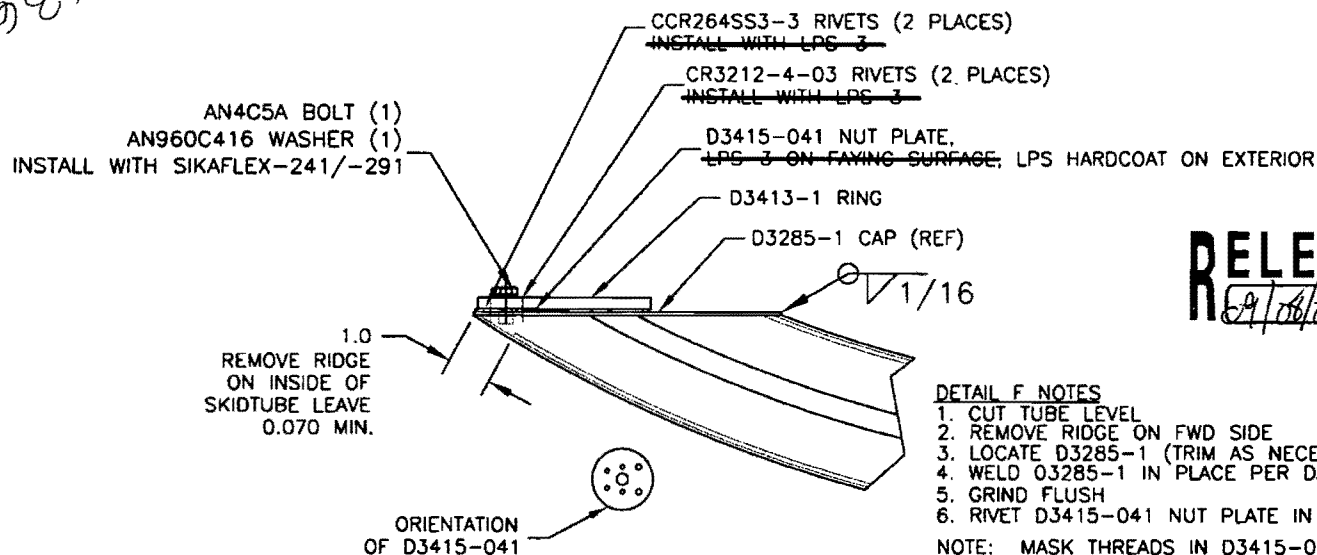
LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

AMEND NOTE 8: ~~"SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS 3' AFTER FINISH AND INSTALLATION OF INSERTS.~~
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER."

AMEND DETAIL F AS SHOWN:

10E977#

DETAIL F: END FINISHING DETAIL



DETAIL F NOTES

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 252

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 66358
Part number: D206 642 541
Description: 206
Welding Process: Tig ☒ Mig ☐
Base material: Aluminum
Current: AC ☒ DC ☐

TEST REQUIREMENTS AND RESULTS

Visual: pass ☒ fail ☐
Penetration: pass ☒ fail ☐

UNACCEPTABLE

Cracks: pass ☒ fail ☐
Undercut: pass ☒ fail ☐
Pin holes: pass ☒ fail ☐
Overlap (cold lap): pass ☒ fail ☐
Porosity (surface): pass ☒ fail ☐
Coloration: pass ☒ fail ☐

Qualifier Pat. Burns Date of Test Coupon 11-05-09
Welder Barclay Elliott Date of Test Coupon 11-05-09

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

11